TERRA

THE NATURAL HISTORY
MUSEUM OF
LOS ANGELES COUNTY

VOLUME 27, NO. 3
JANUARY/FEBRUARY 1989

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NOMADS: MASTERS OF THE EURASIAN STEPPE

Natural History Museum of Los Angeles County February 4–April 16, 1989

Experience the stunning cultural legacy of the nomadic peoples who swept out of Central Asia to threaten the cities of Europe and China. From February 4 through April 16, at the Natural History Museum, nearly 1100 artifacts tracing three thousand years of Eurasian nomadic culture will be on view for the first time in the United States. Organized jointly by the Natural History Museum of Los Angeles County and the Academy of Sciences in Moscow and Leningrad, this major international exhibition contains artifacts from nine museums throughout the Soviet Union.

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TERRA

THE MEMBERS' MAGAZINE
OF THE
NATURAL HISTORY MUSEUM
OF LOS ANGELES COUNTY

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COVER: Cowboy actor William S. Hart was painted by noted artist James Montgomery Flagg in 1924. Flagg was perhaps best known for his World War I recruiting poster of a pointing Uncle Sam, with "I Want You" as its caption. (Left) Flagg painted the cover portrait of Hart in the yard of Hart's Hollywood home. Fritz, Hart's famous Pinto pony and co-star in many films, was added later. Hart built his dream home, which he willed to Los Angeles County, in Newhall, California, around the time this portrait was painted. See page 21 for the story of how Hart achieved his dream. Cover photograph by Ed Ikuta; photograph left courtesy Hart Photo Collection, Seaver Center for Western History Research.

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DEVELOPMENT NEWS

New Fellows and New Adventures. The Fellows, a distinguished group of individuals who support the museum's exhibitions and educational outreach, enjoy a series of adventures made possible through the museum's worldwide network of contacts in the natural sciences and history. Fellows Betty and Tom Reddin, Ann and Howard Gottschalk, Peggy and Bob Sloves, Frank and Inga McCullough, and Beverly and Hyman Savinar recently returned from a remarkable trip to Colombia. Escorted by Dr. Peter Keller, the museum's Associate Director for Public Programs and a well-known mineralogist, the group traveled to emerald mines and a lost city and enjoyed a private tour and reception at the fabulous Museo de Oro in Bogota. A second group of Fellows will repeat this Colombian adventure in January 1989; planning for an African adventure this summer is well underway.

The museum welcomes the following new Fellows with gratitude for their support: Mr. Frank L. Arensberg, Mr. and Mrs. Robert C. Baker, Douglas and Polly Benson Brown, Mr. and Mrs. Stephen J. Cannell, Mr. and Mrs. William H. Doheny, Howard House, M.D., Mr. Andrew J. Hopwood, Mr. and Mrs. Jack Hupp, Mr. and Mrs. Jeffrey F. Jagels, Mr. and Mrs. Tom Johnson, Mr. and Mrs. Milton J. Katz, Dr. and Mrs. Leonard Kleinman, Dr. Frank W. Lavac, Jr., Mr. Ross Leventhal, Mr. and Mrs. W. M. Marcussen, Dr. and Mrs. Alvin Markovitz, Mr. and Mrs. Gregory Royce McClintock, Dr. and Mrs. Samuel J. Miller, Kitty and Steve Moses, Mrs. Grace R. Myers, Mr. and Mrs. Richard Owston, Mr. and Mrs. William Jerome Pollack, Mr. and Mrs. Raymond E. Prochnow, Jr., Joseph and Katherine Ryan, Mr. and Mrs. John L. Spivack, Roy and Beth Stevens, Mr. and Mrs. Bartine A. Stoner, Tana J. Triantos, Frank and Luanne Wells, Dr. and Mrs. A. Glen Wills, and Dorothy A. Wright

Jimmy Stewart thanks Frank A. Pachmayr for his new gift to the Bird Hall, which was announced at the groundbreaking. Over $4 million has been pledged toward the $4.9 million project. Photograph by Dick Meier.

Major contributors and members of the museum's Board of Trustees brought down walls at the groundbreaking for the Ralph W. Schreiber Hall of Birds: (standing) museum Trustees Bob Petersen and George C. Caldwell; (kneeling) Thomas Hageman, Supervisor Peter F. Schabarum's Assistant Chief Deputy; Gary Shiohama, Supervisor Michael D. Antonovich's Assistant Chief Deputy; and Lee Walcott of the Ahmanson Foundation. Photograph by Dick Meier.

Business Associates Welcome New Members. The Business Associates is a distinguished group of corporations that contribute to the museum's important public outreach: enhancing permanent installations, underwriting changing exhibitions, and sponsoring educational programs for children and adults. The museum welcomes new Business Associates:

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Social Behavior of North American Owls

by Paul A. Johnsgard

Photographs by the Author

Embodied silence, velvet soft, the owl slips through the night. With Wisdom's eyes, Athena's bird turns darkness into light. (Joel Peters, "The Birds of Wisdom")

Social behaviors in animals include a very wide range of interindividual communications, both within and between species. They include such rather generalized social responses as social flocking or roosting behavior, as well as much more individualized and complex interactions such as courtship, aggression, and parental behaviors. Regardless of their complexity, social interactions involve some level of communication or the transmission and interpretation of social signals. These signals can be transmitted in any of several sensory channels, which in owls are most likely to include visual, acoustic, and tactile modes of communication.

Most and perhaps all owls show distinctive postures when they are alarmed and when in threat. The typical alarm posture of perched owls is one that emphasizes their remarkable capacity for remaining immobile and blending into their environment. This apparently concealing posture, appropriately called the *Tarnstellung* (camouflage pose) in German, is one in which the owl typically stands vertically upright, often against an upright tree trunk if it is available, with the wing nearer the object of fear drawn sideways and upward toward the bill, often hiding most or all of the relatively pale and often conspicuous underpart coloration. The eyes are often almost entirely shut so as to form slanted slits, even in species having dark-colored eyes. However, in some species such as the great gray owl and long-eared owl the eyes remain fully open, and they may even be blinked in the case of the long-eared owl. Additionally, if any ear tufts are present they are erected to their utmost, and the forehead feathers as well as the "eyebrows" are usually spread, often tending to make these areas less conspicuously contrasting. This feather realignment also often causes a pair of dark lines to pass down from the ear tufts past or through the nearly closed eyes, making them considerably less conspicuous than normally is the case. In species such as the scops owl and screechowls the flattened forehead and eyebrow feathers have a color pattern remarkably similar to that of lichen-covered tree bark, producing an extremely effective facial camouflage. Finally, the rictal (mouth) bristles forming the "moustache" are sometimes pushed forward in such a way as to hide or nearly hide the beak.

When cornered and facing an opponent, or when protecting a nest, the posture assumed by owls is entirely different. Here, instead of presenting the minimum surface area to view, exactly the opposite response occurs, with the feathers of the head and body fully fluffed, the tail often spread, and the wings both spread and raised above the back or variably drooping. This remarkable posture is somewhat similar to the two-wing stretching behavior of owls and perhaps represents a ritualized derivative of it. In this posture the bird may hiss menacingly, clatter its beak, and in some species sway back and forth in a snakelike hypnotic rhythm while directly facing its opponent.

That this is an innate response is indicated by the fact that I have seen nestlings of eastern screech-owls and barred owls perform this posture perfectly like adults on seeing a peregrine falcon *(Falco peregrinus)* for the first time, even though at that time their wings were only partially grown and their bodies were still mostly down-covered. Similar intense defensive responses have been reported in hand-raised great horned and barn-owls upon initial exposure to snakes. In the common barn-owl this defensive posture is typically associated with seemingly almost unending cycles of head swaying alternated with head shaking, accompanied by puffing or beak-snapping (apparently actually tongue-clicking) sounds. A similar posture to this is assumed by both adult barn-owls and their fledged owlets when threatening one another, and this display is probably more offensive than defensive in motivation. At times this same species may also become prostrate and motionless when it is actually picked up by a human, but such "playing dead" behavior does not seem to be typical of North American owls generally.

An important social behavior for many, and perhaps most, owls is mutual preening (allopreening). Even small owlets sometimes perform this behavior, so it is not necessarily a kind of courtship, but it is certainly engaged in primarily by paired birds and almost certainly is an extremely important pair-forming and pair-bonding type of activity. In the common barn-owl mutual preening occurs regularly between pair members throughout winter, the female usually approaching the male while uttering squeaks or whistles and preening him all over, but especially around the face and the back of

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The barn-owl is notable among owls in that it has at least 15 distinct calls, as well as tongue-clicking and wing-clapping modes of communication.

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"He [the scritch-owl] keepeth ever in the deserts and loveth not only such unpeopled places, but also those that are horribly hard of access." (Pliny, *Natural History*)

the head and neck. The preened bird responds "with apparent pleasure" by uttering twittering noises and chirrups. Often the two birds doze for a time following such a period of preening. In the great gray owl allopreening is one of the strongest behavior patterns evident during pair bonding. It can be readily elicited by humans from adult wild owls of both sexes, as well as from subadults, by approaching the bird with the top of one's head (hairy, not bald!) toward its face, which stimulates the preening response, even in badly injured birds. Mutual preening in this species probably serves to reduce aggressiveness between individuals and may provide for both sexual recognition and pair-bond maintenance. It has been suggested that although allopreening is known to occur in numerous owl species, its function is still rather uncertain, but it may represent ritualized aggressive biting behavior. It probably is not important as a means of achieving either sexual or individual recognition.

Reduction of danger to both sexes, but especially to the smaller males, is probably an important aspect of pair-bonding behavior in owls, and it has been suggested that one advantage of the reversed sexual dimorphism typical of most owls is that it allows female dominance to be established at the time of pair formation with a minimum of dangerous aggressive encounters between the two birds, which is obviously advantageous to both sexes.

The long-eared owl in defensive posture. Defensive wing-raising is typical of nearly all owls.

For probably most owls, a major part of courtship signalling and territorial advertisement consists of calling behavior. This usually occurs during evening and night hours, even in the relatively diurnal species such as the burrowing owl, although in high-latitude breeders of course it regularly occurs during daylight. Probably in most owls these advertisement calls are at least initiated by the male, and are predominantly performed by them, either from perches scattered around the male's territory or as "song-flights" from above it, as in the common barn-owl. Unmated females are probably attracted to such calls and often have distinctive answering calls by which they probably gain entrance into the male's territory and begin to establish individualized contact. Vocal duetting is not uncommonly performed by presumably paired owls and, for example, occurs in such diverse groups as some fish owls *(Ketupa)* and scops and screech-owls *(Otus* spp.), as well as in tawny, long-eared, little and spectacled *(Pulsatrix perspicillata)* owls. Although monogamy is certainly the normal mating pattern in owls, scattered instances of polygamy (bigyny) have been reported in the snowy owl, Tengmalm's owl, and northern hawk-owl.

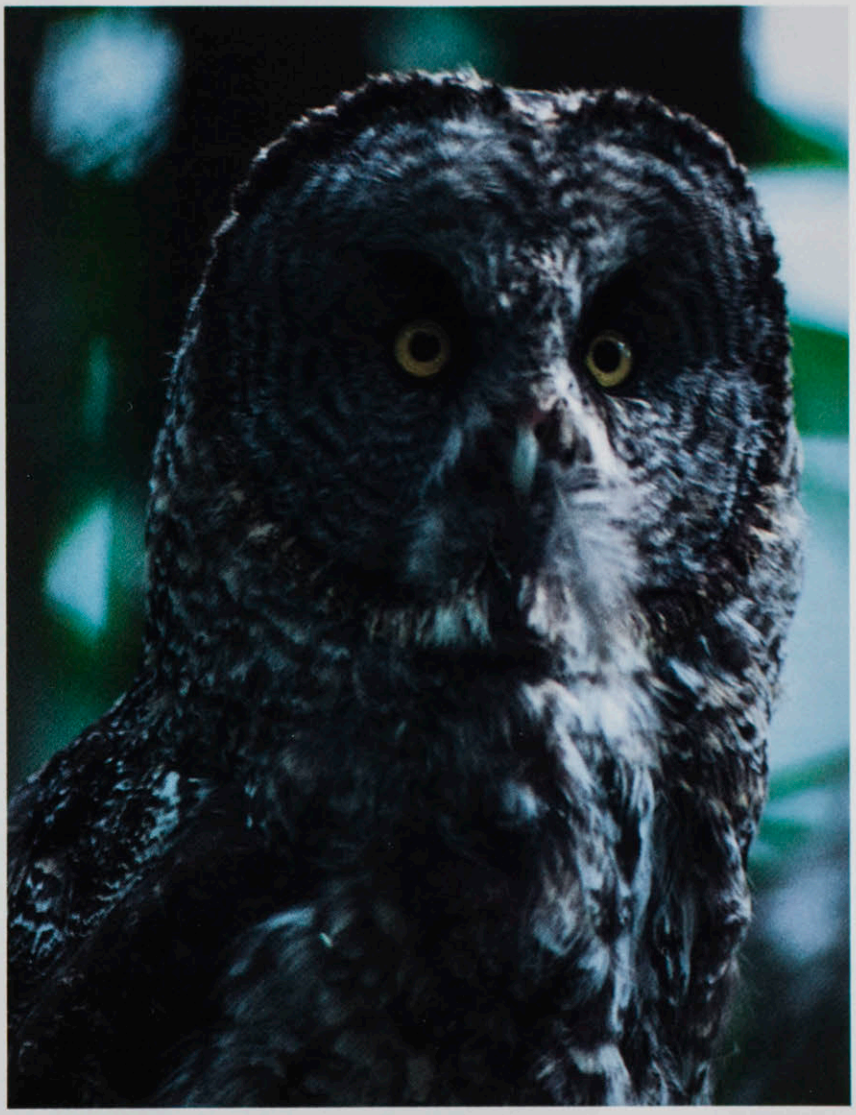
Courtship displays in owls often involve aerial activities. In the short-eared owl a major courtship display is an aerial wing-clapping display. Like the snowy owl, this open-country species occupies territories that have few if any available elevated perches from which to hoot, and flight displays are an ecologically appropriate type of advertisement behavior. Wing clapping is performed by the male short-eared owl while circling in the vicinity of his territory and occurs before pair formation, thus serving to advertise his availability for mating as well as his being a territory-holder. Courtship calling may often occur during this aerial phase of display, but it was also observed to be uttered by a perched male shortly before copulation. Courtship feeding also often immediately precedes copulation, and in some cases the female

flew to the prey-carrying male, whereupon the male performed a food-begging display (opening his wings and fluttering them while presenting the prey in his mouth to the female). Similar passing on of prey by the male to the female occurs at the nest, during both the incubation and brood-rearing periods. Somewhat similar precopulatory behavior, involving food presentation, has been observed in the snowy owl. Courtship feeding has also been observed in many other owls, such as the common barn owl and is probably a regular component of owl pair-forming and precopulatory behavior.

In the common barn-owl a wing-clapping display also occurs, but it is much rarer and less loud than is the case in species of *Asio* (such as long-eared and short-eared) where it has been observed. The "moth flight," an aerial display marked by shallow wingbeats, also occurs in the common barn-owl, as does a repeated "in-and-out" flight during which the male apparently attempts to entice the female into a nesting site. Copulation in the common barn-owl is apparently not invariably associated with prey presentation by the male. Rather it often occurs without apparent prior display when the female begins to "snore" quickly and lowers her body. Thereupon the male mounts her, balancing with his spread wings and holding her nape with his beak feathers. Tongue-clicking, bill-fencing, and cheek-rubbing activities are all regular and important parts of courtship in common barn-owls and are also very commonly performed by owlets once they are old enough to become relatively active.

Nest building does not occur as such in most owls (although nest excavation does occur in some), but simple scrapes are produced by short-eared owls and snowy owls that are later lined (possibly fortuitously) with a few stalks of stubble. The female short-eared owl may do at least some of any nest construction that is performed by this species.

Incubation behavior begins with the laying of the first eggs in most owls, which of course results in staggered hatching times for the young. In the common barn-owl eggs are laid at two- to three-day intervals; thus the eggs normally hatch at intervals of about two days, meaning that in a very large clutch of six to seven eggs there may be more than a two-week span in the hatching dates of the owlets. Certainly in the owl species that have been closely studied only the female is known to incubate; various reports of male owls assisting in incubation thus need confirmation. Incubation lasts an average of about four weeks in owls, ranging from as little as about twenty-one to twenty-two days in the elf owl to perhaps as long as about thirty-four to thirty-five days in the great horned owl.



Great gray owl. The enormous circular face of this owl probably functions as a sound-receiving double parabolic disk.

During the incubation period the male provides his mate with food for her to consume while sitting, but as soon as hatching has occurred the female passes on much of the food provided by the male to her brood. After hatching, the eggshells may be eaten by the female, carried away and dropped some distance from the nest, or sometimes simply pushed into a corner of the nesting site. Brooding of the young while they are still quite small is quite intense, with the female gathering the huddled

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Short-eared owl. A ground-nesting owl, the colors of the short-eared owl match perfectly with dead grass.

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owlets around and under her, virtually enclosing them in her breast feathers and drooping wings. Gradually the female simply stands beside the older owlets, sometimes partially hiding them from view by wing drooping. Eventually the young become old enough that they can safely be left for short periods, while both the members of the pair begin to gather prey. The role of females in prey catching for the young is seemingly rather variable. In the common barn-owl parental brooding gradually ceases when the eldest owlet is about three to four weeks old and the youngest about thirteen to twenty days. Actual fledging requires about fifty to fifty-five days.

In the other North American owls the fledging time varies from as little as twenty-seven to twenty-eight days in the elf, saw-whet, and pygmy-owls to as long as sixty-three to seventy days in the great horned owl. The young of hole- and cavity-nesting owls spend virtually their entire prefledging period safely hidden within the confines of the nesting site, whereas those of such exposed nesting species as snowy, short-eared, long-eared, great horned, and great gray owls often begin to leave their nests for varying lengths of time when they are only about halfway through their fledging period. In the case of the tree nesters, the young owlets soon begin "branching," which consists of clambering about on branches and tree trunks, often even adeptly climbing nearly vertical surfaces while they are still flightless. Similarly the young of snowy owls are able to climb over ground obstacles when only about twenty days old, and young short-eared owls may hide in tall grass some distance from the nest while food is brought to them or dropped from above by their parents.

While owlets are quite young the female common barn-owl cleans the nesting area by eating their feces, although regurgitated pellets are allowed to accumulate. In the long-eared owl, where feces are usually voided over the side of the nest or dropped through its bottom, such nest hygiene may be lacking. Initially the young are often fed rather small prey or torn-up portions of larger prey, but as they grow they are increasingly provided with entire carcasses of larger animals. Observations indicate that sibling owlets rarely steal food from one another, and indeed the older ones may at times attempt to feed their younger siblings, suggesting that sibling killing and associated cannibalism in owls is probably much rarer than is generally imagined. In common barn-owls cannibalism is just one more by-product of undue stress, whether from severe weather conditions, prey shortage, or nest disturbance. Nevertheless, food competition must play an important role in influencing overall reproductive success.

Horned owl. The nearly hidden white throat area is puffed out and probably serves as a visual beacon during twilight calling.

Paul A. Johnsgard is well known for his perceptive, entertaining, and accurate writing on ornithology. He has received numerous literary honors, including awards from the Library Journal, *the Wildlife Society, the Mari Sandoz award from the Nebraska Library Association, and the Loren Eiseley award. This article is an excerpt from* North American Owls, *by Paul A. Johnsgard. Published by the Smithsonian Institution Press, Washington, DC 20560.* *Copyright 1988 by the Smithsonian Institution. All rights reserved.*

Owls and Owling in Southern California

by Kimball L. Garrett

Photographs by the Author

Eleven species of owls occur in southern California, although most of these are rarely seen unless diligently sought after. Our most familiar and widespread species is the great horned owl; common barn-owls are nearly as widespread, but less numerous in most areas. In proper habitat the western screech-owl and the burrowing owl are readily found. Four of our owls are little-seen residents of mountain canyons and coniferous forests: the flammulated, northern pygmy, spotted, and northern saw-whet owls. We sometimes find the long-eared owl at nests or in winter roosts in desert tree groves, and the diminutive elf owl maintains a tenuous foothold in riparian groves in and near the Colorado River Valley. Our final species, the short-eared owl, is mainly a winter visitor to marshy areas.

Finding Owls

Our first encounters with owls are often auditory, and a knowledge of the vocal repertoires of our local owls can be very helpful. The rhythmic, deep hooting of the great horned owl is familiar to us who dwell in all but the most heavily urbanized areas; but how many recognize the rasping hiss of a barn-owl, the barking hoots of a spotted owl, or the whistled tooting of a northern pygmy-owl? And did you know that our screech-owls don't "screech" at all, but usually give a series of short, soft hoots in a rapid "bouncing ball" pattern? A mastery of owl calls comes first and foremost with careful listening and note-taking in the field, but there are some commercially available recordings. Best is Ben B. Coffey, Jr.'s *Voices of New World Nightbirds* (Ara Records, Gainesville, Florida). Good recordings are also available on Roger Tory Peterson's *Field Guide to Western Bird Songs* (Houghton-Mifflin Co., Boston), and the joint National Geographic Society/Cornell Laboratory of Ornithology *Guide to Bird Sounds* (National Geographic Society, Washington D.C.).

Owl encounters of the visual kind usually involve daytime sightings of roosting birds, crepuscular (dusk or dawn) owl activity, or roadside glimpses in car headlights. To watch nocturnal owls going about their business requires some stealth, some knowledge of owl habits, an ability to "converse" (through imitation or prerecorded calls), and a great deal of patience. The best technique is to walk slowly (or make many driving stops) through appropriate habitat, listening carefully. Taped or imitated calls used sparingly may initiate calling by owls, and a continued vocal exchange will often bring owls within the limits of your flashlight beam. Certain calls within an owl species' repertoire are better attractants than others; sometimes a "dying mouse" imitation (achieved with loud squeaky kisses to the back of your hand) will help bring in an owl. Patience, again, is the key; owls may be within earshot of your calls but very slow to respond.

Southern California Owl Species

Common Barn-Owl *Tyto alba*

This pale "earless" owl is recognized by its whitish heart-shaped facial disk. It is widespread in lowlands where some trees or cliffs are available for nest sites; however, it shuns most heavily developed and heavily wooded areas. The barn-owl has the most extensive world distribution of any owl. It is usually active only in darkness, but roosting birds may be seen during the day in groves of trees around ranchyards.

The common call is a rasping hiss, sometimes accompanied by bill clicking; barn-owls do not "hoot."

Great Horned Owl *Bubo virginianus*

This is our common, large "eared" owl; the "ears," of course, are simply tufts of feathers, the true ears being hidden by dense feathering. Great horned owls are widespread in all habitats except treeless deserts, extensive agricultural areas, the most heavily urbanized parts of the Los Angeles Basin, and our densest mountain forests. They are fond of perching on treetops and telephone poles and are often seen in the open at dusk and dawn.

The typical call is a series of four to seven deep hoots, calls of the male being lower in pitch than those of the larger female. Young birds give a raspy wail.

Flammulated Owl *Otus flammeolus*

This is a small migratory owl that nests sparingly in pine and oak woodlands in some of our mountain ranges; if you can seek and find this species you've earned an owling merit badge.

"In sum, he [the scritch-owl] is the very monster of the night, neither crying nor singing out clear, but uttering a certain groan of doleful meaning."
(Pliny, *Natural History*)

These two young spotted owls (Strix occidentalis) *have recently fledged. As old-growth forests disappear, so too goes the large, brown-eyed, "ear-less" spotted owl.*

At seven inches it is smaller than the related western screech-owl; it lacks noticeable tufts and has dark, rather than yellow eyes. Favorite sites to look for this poorly-known owl include Buckhorn Campground in the San Gabriel Mountains and the forested areas on Mt. Palomar in San Diego County.

The typical call is a soft "hoo" or "hoo... hoo," surprisingly deep for so small a bird.

Western Screech-Owl *Otus kennicottii*

It is in mature live oak woodlands that this species reaches peak numbers, although populations also occur in mixed oak and pine woods, riparian groves, desert woodlands, and very locally in orchards and suburbs. It is perhaps our easiest small owl to "call up"—try conversing with one the next time you're in a dense oak woodland in the Santa Monica Mountains or the Santa Barbara back-country.

The quick hooting of this small owl accelerates in pace, for a "bouncing ball" effect. A variety of other sounds are given, though few qualify as true screeches.

Northern Pygmy-Owl *Glaucidium gnoma*

Tiny, long-tailed, and lacking ear tufts, the pygmy-owl is an uncommon denizen of mountain forests and wooded foothill canyons. Besides the burrowing owl it is our only small owl apt to be active in daylight, often calling from treetops in the early morning.

The pygmy-owl's typical call is a rhythmic piping whistle on one pitch, in quality much like a note in the medium registers of a recorder. Imitations of this call in mountain woodlands will often attract flocks of curious songbirds during daylight hours.

Elf Owl *Micrathene whitneyi*

Less than six inches long, this is the world's smallest owl. Characteristic of desert woodlands from Arizona and southernmost Texas south through central Mexico, this is the tiny owl one associates with saguaro cactus "forests" in the southwest. Like the saguaro, the elf owl becomes quite scarce west of the Colorado River; habitat destruction along the lower Colorado River and at our scattered Colorado

Burrowing owls (Athene cunicularia) *are widespread in southern California. Burrowing owls can be quite active during the daylight and are sometimes seen hovering above fields at twilight.*

"*Noctua* the owl is called a *Noctua* because it flies about by night *(nox)*. It cannot see by day, because its sight is weakened by the rising splendor of the sun." (From a 12th-century bestiary)

Desert oases has nearly eliminated this owl from the state of California. It is migratory, present in the northern part of its range only from late March to early August.

The elf owl's call is a high yipping series, quite unlike any of our other owls.

Burrowing Owl *Athene cunicularia*

This is the long-legged, ground-dwelling owl of open plains, deserts, and agricultural regions. Thought of as a companion of prairie dogs in "towns" through the western plains, the burrowing owl is also widespread in southern California (though now rare on the coastal slope as urbanization takes its toll on open habitat). It also occurs on some of the Channel

Islands. Burrowing owls can be quite active during daylight hours and are sometimes seen hovering above fields at twilight. It is not often heard away from the vicinity of its nest burrow.

Spotted Owl *Strix occidentalis*

As old-growth forests disappear, so too goes the large, brown-eyed, "ear-less" spotted owl; northern populations of this species have declined severely with the felling of mature forests of douglas-fir and other conifers. In southern California spotted owls persist in our deeper, more heavily wooded mountain canyons, but the species rarely strays within earshot of our foothill suburbs.

The spotted owl's hooting has a barking quality and a distinct cadence: "hoo, hoo-hoo, hoooo-ah."

Long-eared Owl *Asio otus*

Along with its short-eared relative, this owl is found through a wide area of North America and Eurasia. Early accounts from coastal southern California indicate that it was common in lowland willow woodlands, but these days we usually only find long-eared owls in dense groves of trees around desert ranchyards and oases. Wintertime roosts of forty to seventy birds have been reported, but numbers are generally smaller and known nest and roost sites in southern California are few.

Long-eareds are relatively silent owls, though nesting birds give a single deep hoot and a variety of odd rasping and wailing cries.

Short-eared Owl *Asio flammeus*

This is an owl of open country, being especially fond of marshes, lush grasslands, and agricultural fields where rodents are plentiful. In southern California it is mainly an uncommon migrant and winter visitor; it is most frequently encountered in wet swales and agricultural areas on the deserts. Unlike the long-eared owl, this species is frequently active during daylight hours. It is normally silent away from its nesting grounds.

Northern Saw-whet Owl *Aegolius acadicus*

This enigmatic small owl nests irregularly in our mountain pine and oak woodlands, with populations fluctuating in number and location through the years; it is nowhere common in southern California. A few also nest on Santa Cruz and Santa Catalina Islands, and the odd wintertime bird is sometimes found in the coastal and desert lowlands.

The typical call is a whistled "toot," repeated monotonously. Sometimes these notes are given in a soft, rapid series.

Three additional owl species occur in northern California. The great gray owl is a rare resident in the higher mountains, the barred owl has recently colonized forested areas in the northwesternmost corner of the state, and the snowy owl is a scarce winter visitor during major irruption years.

Where to Look for Owls

Your own back yard might very well be the best place to begin looking for owls, as great horned owls are characteristic inhabitants of many of our residential areas. For a more ambitious effort, take a drive up the Angeles Crest Highway, the Mount Pinos Highway, or Highway 38 in the San Bernardino Mountains. All of these roads lead upward through oak and mixed woodlands that might harbor western screech-owls and into mixed coniferous forests where small numbers of northern pygmy-owls, flammulated owls (summer), spotted owls, and northern saw-whet owls might occur. Densely wooded canyons at medium elevations are ideal for pygmy-owls and spotted owls, while the other two mountain owls are more partial to mixed stands of pines, firs, and oaks. Bring a strong flashlight, a good vocabulary of owl calls, and some patience.

Desert ranch yards and windbreaks will usually turn up barn-owls and sometimes yield a long-eared owl. Burrowing owls are especially plentiful in agricultural areas around the Salton Sea and the Colorado River.

Kimball L. Garrett has been Collection Manager in the Section of Ornithology at the Natural History Museum of Los Angeles County since 1982. He is co-author of Birds of Southern California: Status and Distribution *and* The Audubon Society Book of Waterbirds *and is currently at work on a field guide to warblers. An incurable birdwatcher even as a child growing up in the Los Angeles area, Garrett's recent interests have centered on urban and exotic birdlife in southern California, montane avifaunas, and the documentation and preservation of natural history collections.*

There came a gray owl at sunset, There came a gray owl at sunset, Hooting softly around me, He brought terror to my heart. (Pima Indian song)

EDIBLE FLOWERS: TO THE PURPLE BORNE

by William Breen

In the May/June 1987 issue of TERRA, *author William Breen described the backgrounds of and gave recipes for such eclectic and exotic salad greens as radicchio, arugula, and mâche. He now turns his attention to edible flowers; purple ones in particular —hence, "to the purple borne." All of these flowers, while not all native to California, can be grown —and eaten—locally.*

Lavender

In the language of flowers lavender *(Lavandula sp.)* figures prominently. These poetic expressions reached their zenith in the eighteenth and nineteenth centuries—lavender to beaux and belles of those times could mean "fervent but silent love," "sweetness and undying love," and could also be a "good luck gift to a woman."

The John Gerard *Herbal* of 1587 mentions the comforting properties of lavender, and herbalists of his day used it as a condiment in the flavoring of dishes to "comfort the stomach." In the sixteenth century the English herbalist William Turner called lavender a "comfort to the brain."

Comforts continued. A bawdy seventeenth-century drinking song known as "The Kind Country Lovers" obliquely refers to comforting lavender. Scrupulously laundered, this song reemerged in the 1949 Disney film *So Dear to My Heart* and is entitled "Lavender Blue, Dilly, Dilly." Blue describes the English garden favorite *Lavandula vera*, but the Mediterranean lavender *(Lavandula stoechas)* with dark purple flowers is the lavender commonly cultivated in southern California.

A comforting way to sooth jangled nerves is to sip lavender *tisane* (an infusion of lavender flowers steeped in hot water), and of course lavender jelly spread on one's morning toast is completely comforting. Think about chopped lavender flowers added to popover dough. Imagine the aroma when you break open one of those popovers and spread it with butter! Ragouts, punches, marinades—all benefit by introducing lavender imaginatively.

The late food writer Waverly Root claimed that meat, like the clarinet, contains some rather ho-hum notes in its middle register. Lavender, however, bridges the gap in the following Pam North recipe. For gourmet exhilaration it's a winner throughout the entire flavor spectrum.

POTPOURRI PEPPER STEAK WITH LAVENDER

4 beefsteaks
12 dried lavender wands (leaves and flower spikes)
12 sprigs dried rosemary
12 sprigs dried thyme
12 sprigs dried sage
½ cup fresh herbs (all of the above) minced
2 cups red wine (dark and dry)
black pepper to taste (freshly and coarsely ground)
2 T olive oil
1 T flour
2 T butter
salt to taste

Prepare a marinade by crushing dried herbs with pestle and mortar. Put in a bowl with the wine; add pepper and olive oil. Place four beefsteaks in a shallow pan and cover with the well-stirred marinade. Marinate for several hours, turning occasionally for maximum absorption.

Remove steaks and put aside. In heavy-bottomed saucepan make a roux by whisking the butter and flour. Slowly add the marinade, whisking the while. Convert marinade to sauce by cooking until reduced by one half. Salt to taste.

Broil or barbecue the beefsteaks, basting with the sauce. When cooked as desired, place on hot platter, sprinkle with the cup of fresh herbs, additional pepper, and pour on remaining sauce. Serves four.

Borage

After all that comfort we now encounter an old English couplet that says, "I, Borage, Bring alwaies courage." The "courage" alluded to may be found in several English drinks that are sometimes enhanced with a light sprinkling of crushed borage *(Borago officinalis)* flowers. After our steaks a traditional English Pimms might not be bad —it includes borage, which imparts a cucumber coolness and sweetness.

Borage's small purple-pink and star-shaped flowers are also very pretty. Cold soups, salads, pasta dishes, and certainly flower-petal butter all come to mind. For the latter just chop up borage flowers and mix them into softened butter. Teatime sandwiches, hardly robust fare, will nonetheless have plenty of sass if made with a crab, sunflower seed, and chopped watercress mixture bound with a little mayonnaise. Spread this on borage-buttered bread—and prepare to receive compliments.

Fritters can be made with borage leaves and flowers chopped up and bound with a little flour and beaten egg. Dipped in a light batter, deep fried, and drained on paper towels, they are good—and unusual. Serve them as an hors d'oeuvre sprinkled with a little salt and lemon juice. The dish could be ringed with small abstractly shaped cantaloupe slices along with the ubiquitous kiwi slices. They, too, should be sprinkled with salt and lemon juice.

Violets

"To strew the green with flowers; the yellows, blues, the purple violets, and marigolds."
Pericles, Act IV, scene I

This play of 1608, although attributed to Shakespeare, is generally thought to have been written by someone else. It nonetheless inspires a delightfully colorful salad. We will skip the blues and the marigolds, but for a golden glow will use some mustard buds and flowers. They will provide a pungent color contrast and flavor to the bracing sweetness of the violets. We will also use some garden violas—hybridized violets that have nickle-sized, striped, and multicolored flowers—for sparkle.

Our Pericles Salad, with its purple and gold, is suggestive of Europe's royalty. Both Louis XIV and Napoleon were inordinately fond of violets—and certainly of gold. The former not only admired the flower but also demanded violet-strewn salads.

PERICLES SALAD

5 cucumbers, peeled, thinly sliced
¼ cup finely torn chervil leaves
1 sweet onion, finely diced
1 T lemon juice
salt and pepper to tase
¾ cup sour cream
¾ cup mayonnaise
6 hard boiled egg yolks, grated
2 heads romaine lettuce
1½ cups mustard buds and flowers
1½ cups violets (purple)
36 violas

In a shallow dish marinate the cucumbers, onion, and chervil in lemon juice for a few hours. Thoroughly blend the sour cream and mayonnaise, reserving one-quarter cup of the mixture.

Drain the cucumbers well and add salt and pepper to taste. Toss well with half the mayonnaise and sour cream mixture, but do not use the quarter cup you have reserved.

Rim a salad bowl with some outer leaves of the romaine so that they curl above the bowl edges. Put the cucumbers in the bowl and pour the remaining dressing over them—with the exception of the reserved quarter cup. Sprinkle with half the grated egg yolk and half the mustard buds and flowers. Liberally garnish with whole violets and violas. Serves six.

Serve this salad with toasted squares of rye bread. Toast six slices of rye bread and quarter them after lightly buttering each slice. Mix the quarter cup of sour cream and mayonnaise mixture with the remaining grated egg yolk and mustard flowers. Spread some on each square and sprinkle with torn violets and petals. Press with spatula so flowers adhere. Top each square with a single viola.

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Robert Gustafson

Borage (Borago officinalis)

A variety of violets

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"The Violet in her greenwood bower,
Where birchen branches with hazels mingle,
May boast herself the fairest flower,
In glen, or copse, or forest dingle."
Sir Walter Scott, "The Violet" (1792)

Sir Walter Scott's verses suggest pasta with violets and hazelnuts—out of the copse and onto the table.

VIOLET AND HAZELNUT PASTA
10 ounces pasta spirals
3 chopped scallions
¼ cup minced sweet red pepper
6 T melted butter
¼ cup ground hazelnuts
⅓ cup whole hazelnuts
1 cup light cream
2 T brandy
salt and white pepper to taste
2 T violet petals
¼ cup whole violets

Have the scallions, sweet red pepper, and the hazelnuts ready. While the pasta is cooking *al dente* in two quarts of salted boiling water, add to the cream half the melted butter, the ground (the finer the better) hazelnuts, and the brandy. Stir thoroughly and begin to reduce by one quarter. Toss scallions, sweet red pepper, and whole hazelnuts in skillet with remaining melted butter until coated—and very lightly continue to heat. Stir or whisk the cream until reduction is completed.

Drain the pasta and toss it well with the buttery hazelnuts, sweet red peppers, and scallions. Put pasta in a warmed serving bowl. Sprinkle pasta with the violet petals and pour the hazelnut cream over it. Garnish with the whole violets and serve. Serves four.

Pansies and Hyssop

The pansy, like the garden viola, is yet another hybrid violet. Nonexistent until the eighteenth century, it didn't reach the United States until shortly before the Civil War. Pansies are direct descendants of the wild *Viola tricolora*, commonly known as hearts-ease or Johnny-jump-up. Thirty years of experimentation in hybridizing finally produced *Viola tricolora hortensis*, our charming pansy with its many colors and thoughtful faces. A certain Lord Gambier is responsible. He was busy indeed, being also a British naval commander who took part in the capture of Charleston during the Revolutionary War. The English had already modified the French word *pensée* to pansy, referring to hearts-ease, thus Ophelia's "and there is pansies, that's for thoughts."

Pansies have no scent, but do have a sweet, mild, and slightly grapey flavor. They can be used imaginatively in salads and pastas. I find they are not only beautiful with certain fish and seafood dishes, but they also lend to them an almost emotional flavor quality. A grilled filet of salmon bedded on a lemon saffron sauce is superb. But when that filet has a partial sprinkling of finely chopped anise hyssop flowers, is garnished with a delicate frond of fennel, and the whole surrounded by scattered pansies—sheer bliss! The comingling of colors and flavors is magic. Hyssop *(Hyssopus officinalis)* is being marketed as "anise hyssop." It has small blue to purple flowers and is used in the manufacture of Chartreuse liqueur.

As a flower to mince into custards and puddings, nothing beats pansies—and they are perfect as a garniture. Many flowers are wonderful crystallized and also make interesting wines and vinegars.

A note of caution: not all purple flowers are edible. Our western monkshood *(Aconitum columbianum)*, found in the moist woods and subalpine meadows of the Sierra Nevadas as far south as Tulare County, is poisonous. This plant, a member of the Buttercup Family *(Ranunculaceae)* is poisonous in its entirety. Forget, then, any nibbling of a little buttercup. The Gilbert and Sullivan operetta *H.M.S. Pinafore* contains a possible exception. I know of no other.

As for iris, wisteria, hydrangea, larkspur, delphinium, and the blue-purple glory of the succulent annual lupine *(Lupinus succulentus)*—poisonous. Deadly nightshade explains itself and makes good company with foxglove *(Digitalis purpurea)*. The foxglove's powerful active ingredient, digitalis, is used as a cardiac stimulant.

Flowers that have been sprayed with insecticide are also to be avoided. To ensure that they have not been, we can grow them ourselves or get them from a garden where we know they are organically grown. Another option is to call a reputable produce person or specialty market that handles flowers or can tell us who does. Paradise Farms in Summerland is one excellent source. This is an organic herb and flower farm that grows hordes of edible flowers—somewhere between forty and fifty varieties at last count. They inspire much of the new gustatory brilliance being enjoyed locally—please partake.

William Breen is currently writing and illustrating—especially pieces on food. He suggests calling Pam or Jay North of Paradise Farms in Summerland for edible flowers. The number is 805/684-9468.

The entrance to the house.
Photograph by Ed Ikuta.

La Loma de Los Vientos: William S. Hart's Newhall Home

by Abraham Hoffman

William Surrey Hart achieved international fame as an actor in silent films, appearing in sixty-seven pictures between 1914 and 1925. His primary role was that of a Westerner, and his films were noted for their authenticity in costume and setting.

Fame and wealth came late to Hart in his career. From the mid-1880s until 1914 Hart made his living as a stage actor, and for many years he followed the theatrical circuit from New York to Illinois. For most of the year, every year, Hart apparently lived out of his suitcase in a succession of hotels. When Hart began his Hollywood career, he lived in a rented apartment, remaining there for almost six years, and sharing his quarters with his sister, Mary Ellen. By 1920 his film successes had made him a wealthy man, and apartment life became too constricted for a famous movie star. He purchased a home in what is now West Hollywood in 1920. Hart considered this home "merely an abiding place for Mary and me until my dream comes true."

Hart's "dream" was to purchase a ranch "out in the big open, far removed from railroads and civilization." He hoped to make it a working ranch with green pastures and herds of cattle. Even as he described his dream for *Motion Picture Classic*, Hart had already found the location where the dream home would be—in Newhall, some forty miles from the heart of Los Angeles.

"Yes, I have a fine, big house up at Newhall," Hart wrote a friend. "I like it up there too, but the house has cost me heaps and heaps of money and made my pocketbook look mighty thin."

In 1918 Hart leased the Horseshoe Ranch in Newhall from George Babcock Smith and began acquiring the acreage necessary for the ranch of his dreams. His main concern for the ranch seems at first to have been a desire to secure the boundaries of the property from unwanted neighbors who might intrude on his privacy. He purchased acreage as it became available and increased the size of the ranch to 229 acres. Hart considered tuberculosis a dangerously contagious disease and objected strenuously, and successfully, against a proposed TB sanitarium on adjacent property. He also fought for years against the U.S. Forest Service, waging an ongoing battle against encroachment on his property until the Forest Service gave up arguing with him.

The Horseshoe Ranch buildings consisted of a ranch house that Hart initially used as an office and sometime movie set, a barn, and several outbuildings. He constructed a bunkhouse that doubled as a set in his film *Singer Jim McKee*, made in 1923, and as quarters for his employees. When the bunkhouse was destroyed by fire in 1926, Hart had it rebuilt. The main building, however, would be the home Hart had yearned for all his life.

In 1926 Hart commissioned Los Angeles architect Arthur Kelly to design and build a thirteen-room house at the crest of the hill above the ranch house. Kelly designed the home as a Spanish Colonial building, with tile roofs and white stucco walls. The design was typical of affluent homes of the era. By December Kelly had completed his plans for a two-story residence, seventy by one hundred feet, with thirteen rooms, four bathrooms, three fireplaces, and a hand-made tile roof. The living room was to be twenty-five by fifty feet, and Hart spared no expense in using wrought-iron grilles, leaded glass, hardwood floors, and beamed ceilings. The basic cost of the home was $130,000. Hart soon added a stucco garage and chauffeur's quarters at $5,000 and the rebuilt bunk house at $17,000. Construction of the main house took the better part of 1927, and by October of that year Hart was itching to move in. The construction seems to have gone smoothly enough. Hart had some problem with the bills from his electrical contractor and, finding the explanation unsatisfactory, ordered the expenses audited. He then ceased to deal with the contractor.

Hart kept close tabs on all construction costs, literally down to the price of nails, nuts, and bolts. He wanted quality work, and expense was unavoidable, but he almost joyfully complained about what the house was costing him. He expressed his enthusiasm to a number of friends as the house neared completion. "Yes, I have a fine, big house up at Newhall," he wrote a friend on January 6, 1928. "I like it up there fine too, but the house has cost me heaps and heaps of money and made my pocketbook look mighty thin."

Bill's sister Mary could claim some influence for the building's design. Mary suggested the idea of putting the house at two levels, making a ground-floor rear entrance possible, though the idea required shaving thirty-two feet off the top of the hill to make it feasible. It was Mary

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William S. Hart joins the cast and crew of Singer Jim McKee, *his penultimate film, in front of the bunk house used as a movie set at Hart's Horseshoe Ranch. The little girl is Jackie "Baby" Turner, who appeared in the film. Photograph courtesy Hart Photo Collection, Seaver Center for Western History Research.*

By mid-1927 Hart's hilltop home was well along toward completion. This view was one of many photographs Hart had made to record the progress of construction. Hart Photo Collection, Seaver Center for Western History Research.

Although Hart had retired from film production and acting, he had many show business visitors, including actress Pola Negri. She is shown here posing astride Fritz, Hart's famous Pinto pony, in the late 1920s. Hart Photo Collection, Seaver Center for Western History Research.

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who named the home *La Loma de los Vientos*, Spanish for "Hill of the Winds." Hart had often claimed speaking knowledge of the Sioux language, but he admitted no understanding of Spanish. He conceded that it took three months before he learned to pronounce the name correctly.

During his years as master of La Loma de los Vientos Hart made one major revision to the original design of the house. In 1937 he decided to convert his bedroom into a "dogs" room to accommodate his pets, which at various times numbered half a dozen or so, including two Harlequin Great Danes weighing about ninety pounds each. Hart added a new bedroom to the house for his own use.

To supply water for the ranch Hart constructed a water tower atop a hill behind the house. Many of his expenses listed orders for conduits, valves, and other plumbing devices. The hilltop reservoir came in handy when Horseshoe Ranch was threatened by a brushfire in 1942.

With construction at last completed, Hart's home attracted attention for its architectural stylishness, the relative isolation of its location, and the fame of its resident. *Pictorial California*, which regularly featured the homes of the rich and famous in its pages, visited La Loma de los Vientos early in 1929. The photographs provided a contemporary view of the house, gate tower, other buildings, and the landscape. Hart's impressive fireplace in the living room, "specially constructed to act also as a barbecue for steaks," was noted, as well as the proliferation of Navajo rugs scattered on the floors of the house.

"While I was making pictures, the people gave me their nickels, dimes, and quarters. When I am gone, I want them to have my home."

Hart had been an avid art and gun collector, and he displayed his collections to good advantage in his new home. On his walls hung paintings by Charlie Russell, James Montgomery Flagg, and other noted artists and illustrators. Many of the decorations were authentic Indian artifacts. His library included Western history and fiction, plus the eleven books he wrote, either by himself or in collaboration with his sister.

Hart's "retirement" to his Newhall ranch resulted in large part from the strictures placed on independent producer-actors by the major studios. Hart's last film, *Tumbleweeds*, made in 1925, was poorly distributed by United Artists. It cost Hart thousands of dollars and made it unfeasible for him to continue independently of the studios. Rather than become a studio employee, Hart retired. At first he held out the hope that he could obtain financing for future projects, but as the years passed the possibility of a comeback grew fainter. Hart resigned himself to spending his last years as a gentleman rancher on his Horseshoe Ranch, a reality that fell short of his dream of a true working ranch. There would be no vast herds of cattle, no green pastures. Instead, there were his horses and dogs, maintenance of the grounds, time to spend writing his memoirs and Western stories, and the company of his sister.

Hart did not, however, become a recluse. He entertained his close friends, offering generous but not lavish hospitality. Visitors included his one-time leading lady, Jane Novak; reformed outlaw Al Jennings; artist James Montgomery Flagg; and many others. He was occasionally visited by his son, Bill Jr., the only child of his brief marriage to actress Winifred Westover, but separation was more usual than getting together. Hart tried to fill in the gap by regularly sending his son letters, poems, and whimsical notes.

Hart grew to like the idea of retirement despite his longing to make more films. In 1936 he rejected a comeback offer, saying, "Horseshoe is strictly a nonproductive ranch. I lose $25,000 a year on it. I've got the money to lose so it works out fine."

As Hart aged, visitors became fewer in number while memories grew longer. In February 1938 his famous horse Fritz died, an event considered surprisingly newsworthy as dozens of newspapers carried the story. Hart buried his beloved Pinto pony on the ranch property. His sister Mary died in 1943. With his own life drawing to a close, Hart drew up a will leaving Horseshoe Ranch and his collections to Los Angeles County for use as a public park and museum.

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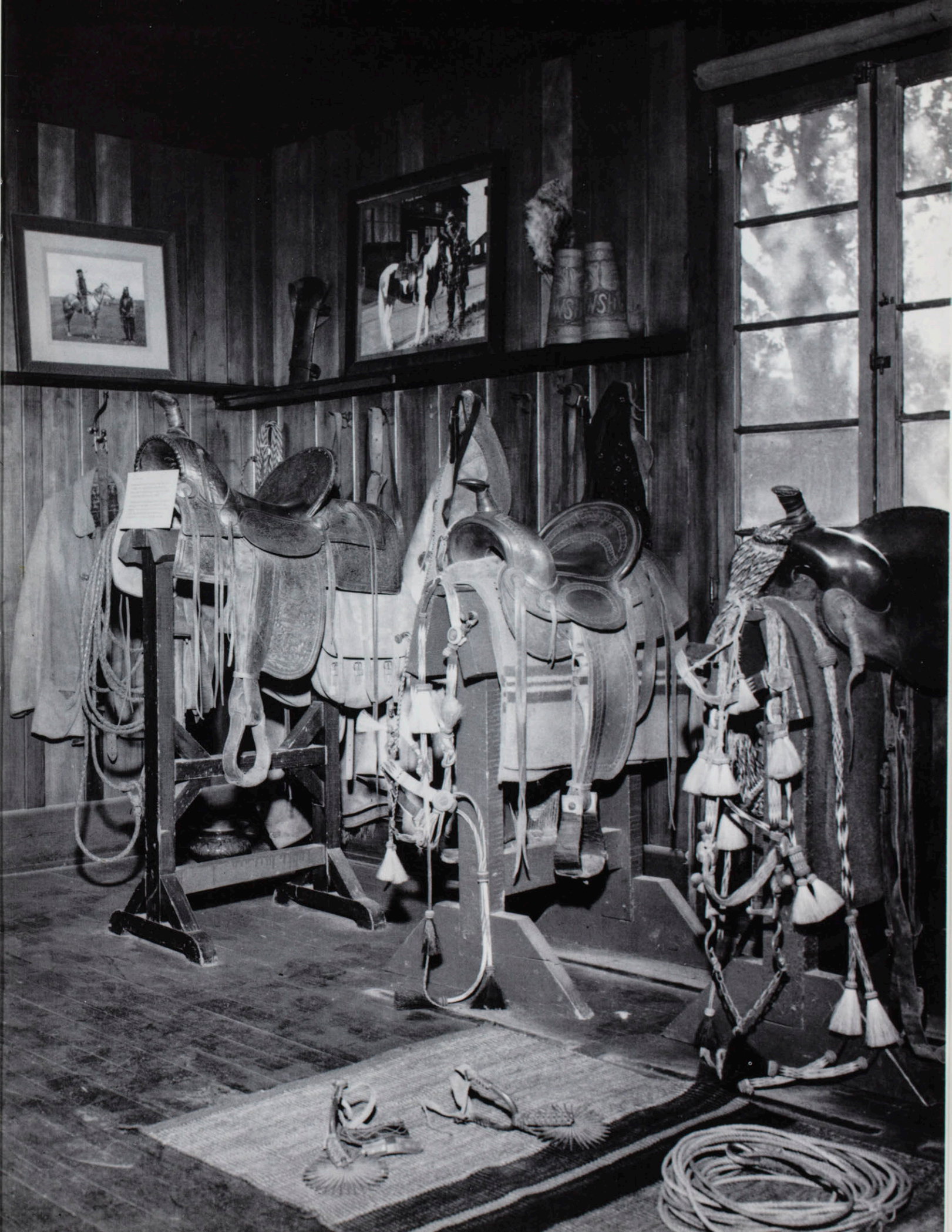
Right: Hart's tack room is located in the Horseshoe Ranch's original ranch house, which serves as a small museum. This photograph was taken in 1960. Hart Photo Collection, Seaver Center for Western History Research.



Hart and actor Johnny Mack Brown look out over the Santa Clarita Valley. The gate tower is in the left center background. Brown, who was starring at the time in MGM's Billy the Kid, *visited Hart at the ranch in 1930. Hart worked as a technical advisor on the film. Photograph courtesy Hart Photo Collection, Seaver Center for Western History Research.*

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Before Hart died he enjoyed a signal honor given him by the Newhall community. In August 1945 the Board of Trustees for the high school district in the Newhall area voted to name the local high school, and the district itself, the William S. Hart High School District. Hart responded with deep appreciation, regretting that his health prevented his working actively to implement the proposal.

In May 1946 Hart suffered a stroke. There was some controversy as to whether he was being cared for properly, and he was placed in the California Lutheran Hospital. A month later having lapsed into a coma, he died, on June 23, 1946. His legacy consists of all he could give to the public—his home and possessions—in return for all that the public had once given him.

Hart's living room as it now appears. Photograph by Ed Ikuta.

Abraham Hoffman received his Ph.D. in History from UCLA. He is the author of three books, some fifty articles, and more than 100 book reviews. Dr. Hoffman is currently assistant editor of Southern California Quarterly *and book editor of* The Californians *magazine. He teaches in the Los Angeles Unified School District. Dr. Hoffman is now working on a biography of William S. Hart.*

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Capital Campaign: Special Leather-Bound Edition of *Navajo Textiles.* William Mingst and Otis Chandler, chairmen of the Leadership Committee for the Times Mirror Hall of Native American Cultures, appealed to museum members and friends for increased funding to complete the $4 million hall. A special leather-bound edition of *Navajo Textiles: The William Randolph Hearst Collection* by Nancy J. Blomberg, Assistant Curator of the museum's Anthropology Section, is available for gifts of $1,000 or more to the Times Mirror Hall of Native American Cultures. This 250-copy collector's edition is hand stamped in gold and bound with special marbled endpapers.

The catalogue, based on years of research by Nancy Blomberg, features nearly 200 illustrations of the 186-piece collection donated to the Natural History Museum in 1942 by William Randolph Hearst. The collection is one of the most complete gatherings of nineteenth-century Navajo weaving in the world and will be on public view with the completion of the new hall in 1990.

In recognition of a gift of $1,000 or more, each donor will be designated a Distinguished Patron of the Natural History Museum and will receive special invitations to private events and recognition among those supporting this important project. The museum gratefully acknowledges additional new donors to the Native American Hall in response to this request: Mr. and Mrs. Stephen R. Onderdonk, Mr. and Mrs. Robert S. Attiyeh, Wells Fargo Bank, Janice M. Cline, Bill Goodan, Dr. and Mrs. Frederick Harper, Edith Agnes Plumb, Mr. and Mrs. William R. Zimmerman, Mary A. Martin, Peter S. Bing, Mrs. Homer D. Crotty, Thomas and Elizabeth Plott, Mr. and Mrs. W. Owens Miller, Mary Katherine and Joseph Ryan, Mr. and Mrs. R. Stanton Avery, Mrs. John Hancock, Mr. and Mrs. Roy Nutt, Mrs. Reese H. Taylor, Mr. and Mrs. Edward F. Johnson, Dr. and Mrs. Sanbo S. Sakaguchi, and Mr. Ed N. Harrison

To order a copy of this limited-edition book, contact the Foundation Development Office at 213/744-3307.

Capital Campaign: Update. The construction of the Ralph W. Schreiber Hall of Birds continues: $4,069,072 has been raised toward the $4.9 million goal. Total funding for all campaign initiatives at the end of September exceeds $20 million with a balance of $3 million to be achieved in the anniversary year. During July, August, and September, the Natural History Museum gratefully acknowledged the following contributors to the Capital Campaign: Marc E. Brown, Mr. and Mrs. Gordon Crary, Jr., Dr. James F. Clements, Mr. and Mrs. David Comsky, Docent Roundtable of the Natural History Museum, Mr. and Mrs. Stephen E. Griffith, Robert M. Heyman, Pharm D., Marvin M. Lager, Los Angeles Audubon Society, Mr. and Mrs. Ray T. McCullough, McDonnell Douglas Corporation, Mr. Frank A. Pachmayr, Rockwell International, The Shea Foundation, Union Bank, United States Borax & Chemical Corporation, Ingrid B. Wustemann, Lorraine P. Young, and The Honorable and Mrs. Evelle J. Younger

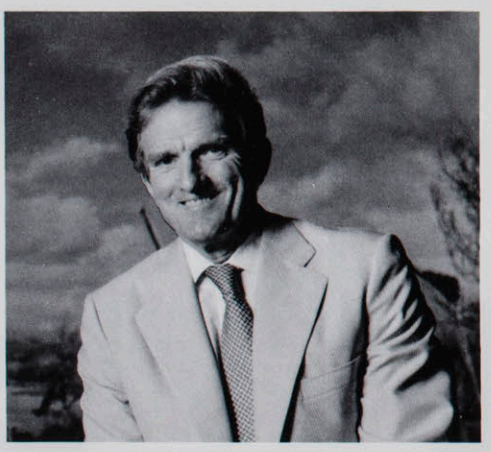
Funding for Times Mirror Hall of Native American Cultures Exceeds Half-way Mark. The museum is pleased to announce United States Borax & Chemical Corporation's contribution of $150,000 to the Capital Campaign. The gift will name a prominent section in the new Times Mirror Hall of Native American Cultures, with groundbreaking scheduled for the beginning of 1989; with this gift, funding for the Hall of Native American Cultures is half complete. A portion of the gift will also go toward completion of the Ralph W. Schreiber Hall of Birds. A total of $2,109,992 has been contributed to the $4 million project.

Irving and Jean Stone Fund Prize for Science Writing. The endowment for the Irving and Jean Stone Prize for Science Writing was announced at the museum on the evening of Mr. Stone's eighty-fifth birthday when friends gathered for dinner and tributes by Jean Stone, Ken McCormick, Franklin Murphy, artist Pascal, James Zumberge, Judd Marmor, William Schopf, Jess Marlow, Leonard Beerman, Walter Cunningham, Art Linkletter, Charles Luckman, and Norman Cousins.

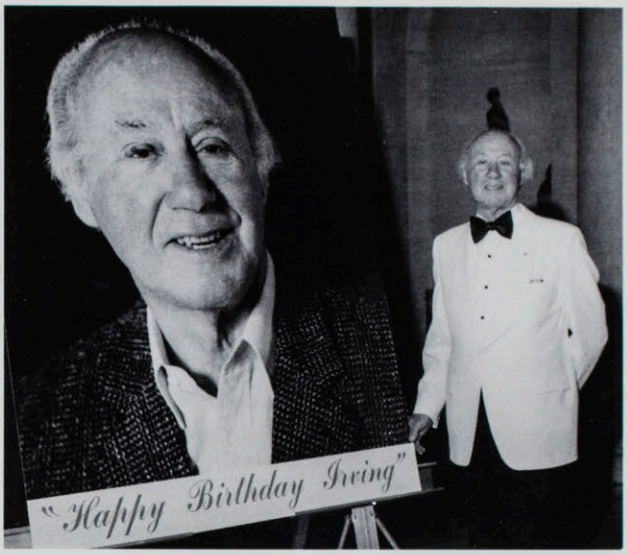
Each year a $25,000 prize will be awarded to the writer who most clearly and effectively writes about science for the general public. The museum celebrates those who have made gifts to initiate the endowment: Gabriel Barnett, Mrs. Hermione Brown, Mr. and Mrs. John B. Clayburgh, Suzanne P. Cummings, Mr. and Mrs. Ralph Edwards, Mrs. Henry Friedman, Mr. and Mrs. Martin Gang, Mr. and Mrs. Guilford Glazer, Mr. and Mrs. Henry Grossman, Theresa and Ira Michael Heyman, Leonard Kasle, Mr. and Mrs. Charles Kenis, Janet King, Mr. and Mrs. Monte E. Livingston, Mr. and Mrs. Charles Luckman, Dr. and Mrs. Judd Marmor, Mrs. Fred N. Nason, Mr. Louis Nizer, Mr. and Mrs. J. Douglas Pardee, Dr. and Mrs. Simon Ramo, Mr. and Mrs. Richard Revnes, Frank and Selma Rosen, Sydney Rosenberg, Herbert Seigel, Mr. and Mrs. Sam Schulman, Carmela and Charles Speroni, Arthur Spitzer, Mr. and Mrs. Irving Stone, Mr. and Mrs. Walter Tauer, Jr., and Cathy Worthington and Ken Kragen

For information on the Stone Endowment, contact Dr. Craig C. Black, Director, 213/744-3301.

Leavey Foundation Makes Special Gift to Education. The museum gratefully acknowledges the support of the Thomas and Dorothy Leavey Foundation for the Education Department's School Tours program. Each year, through this outreach program to public and private schools, 200,000 school children from throughout southern California visit the museum's exhibit halls, galleries, and Discovery Center. For many children, visiting the museum is their first exposure to the intriguing world of natural history.



Otis Chandler (left) and William A. Mingst (right), chairmen of the Capital Campaign Leadership Committee for the Times Mirror Hall of Native American Cultures. Photographs by Jeff Corwin.



Irving Stone on the evening of his birthday tribute dinner at the Natural History Museum. Photograph by Don Meyer.

National Medical Enterprises Contributes to the Moveable Museum. The museum gratefully acknowledges National Medical Enterprises for its support of the Education Department's outreach program. Through this program, the museum's staff is able to achieve its commitment of serving diverse populations by reaching out to individuals unable to visit the Natural History Museum in Exposition Park. "We are delighted that we can renew our support for a program that is so well-presented and so very appreciated by its audience," says Dyanne H. Habegger, Director, Corporate Contributions, announcing her company's second major gift to the museum.

Times Mirror Company Sponsors Lost and Found Traditions. The museum thanks the Times Mirror Company for sponsoring the Los Angeles presentation of **Lost and Found Traditions: Native American Art, 1965–1985.** This gift assists the museum in focusing attention on the Times Mirror Hall of Native American Cultures and the completion of its funding. **Lost and Found Traditions** is an important example of the kinds of changing exhibitions of Native American art that will be displayed in the museum as a result of the new permanent Native American Cultures Hall. Additional funding for this exhibition was provided by Many Horses Gallery.

Matthew K. Fong Appointed to the Board of Governors of the Natural History Museum. Mr. Fong is a business attorney with the law firm of Sheppard, Mullin, Richter & Hampton. His practice focuses on the Pacific Rim, specifically, transactions between the United States and the Republic of China. His clients include the Republic of China, People's Republic of China, Hong Kong, South Korea, and Singapore.

Mr. Fong received his law degree from Southwestern Law School. He served as campaign manager for his mother, California Secretary of State March Fong Eu, in her 1982 re-election campaign. While serving five years in the U.S. Air Force, following his graduation from the Air Force Academy, he was involved in flying, public relations, and computer management. Currently active in the USAF Reserves, he holds the rank of Major and serves as a USAF Academy Admissions Liaison and Congressional Liaison officer.

As a community leader, his activities include Legal Counsel of Chamber of Commerce, Monterey Park Chamber of Commerce; California Congressional Recognition Program Council; and the Los Angeles Police Department Asian Pacific American Recruitment Advisory Panel. He holds memberships in the American, California, and Los Angeles Bar Associations. As a Governor of the Natural History Museum, he is also a Trustee.

Jose I. Lozano Appointed to the Board of Governors of the Natural History Museum. Mr. Lozano, publisher of *La Opinion*, California's largest Spanish-language newspaper, is an active member of the community. His memberships include the American Newspaper Publisher's Association; National Association of Hispanic Journalists; Los Angeles World Affairs Council; Board of Directors of the Los Angeles Conservancy; and the Board of Directors of the Arroyo Vista Family Health Center.

As successor to Dr. M. Norvel Young, Chancellor Emeritus of Pepperdine University, who served on the museum's Board of Governors for twenty-eight years, Mr. Lozano is also a Trustee of the museum.

Millicent Hearst Boudjakdji Elected to the Natural History Museum Foundation's Board of Trustees. Mrs. Boudjakdji, granddaughter of the late publishing executive William Randolph Hearst, is a realtor associate with the Jon Douglas Company of Los Angeles. She is a director of the Hearst Corporation, the William Randolph Hearst Foundation, and the Hearst Foundation, Inc.

Mrs. Boudjakdji holds a degree in English from UCLA. She has reported for the Los Angeles *Herald Examiner* and covered the United Nations for the Hearst Headline Service.

Mrs. Boudjakdji and her husband, Raouf, live in Los Angeles and have three children. Mr. Boudjakdji, a diplomat, has served as the Ambassador from the Republic of Algeria to the United Nations in Geneva, to the Vatican, and to India.

Mrs. Boudjakdji joined the Development Committee of the museum to work with Mrs. Thomas Reddin and the Board of Trustees to ensure support for Education and Exhibitions in the museum's expanding area of Public Programs.

AWARDS

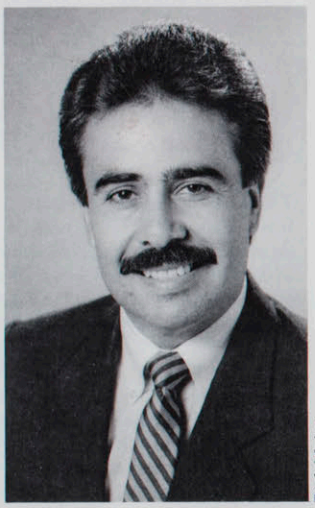
The Museum's Public Relations Department Receives Awards. The Natural History Museum's Public Relations Department received two awards from the Public Relations Society of America's (PRSA) Los Angeles chapter.

• The promotional program for **Hollywood: Legend and Reality,** the largest collection of Hollywood memorabilia ever assembled, won a PRisms award, the only award given for Entertainment Marketing. Mary Ann Dunn, Director of Public Relations, and John Charnay, Director of Marketing, submitted the goals of the exhibition and its promotional components inaugurating the museum's seventy-fifth anniversary year. The museum curator for the exhibition was Dr. Janet Fireman, Chief Curator of the History Division.

• The second award applauds the media program for **Art from the Navajo Loom: The William Randolph Hearst Collection.** The exhibition won a Merit Award in the Media Kits category. Mary Ann Dunn, Director of Public Relations, accepted the award. Curator for the exhibition was Nancy J. Blomberg, Assistant Curator of Anthropology.

The Natural History Museum was the only museum and one of only two nonoprofit organizations to win awards. The award is particularly competitive, with many entries in every category. Our award-winning Public Relations department has received five awards in the last three years.

NEW STAFF



Dick Meier

Leonard M. Navarro, the museum's new Deputy Director.

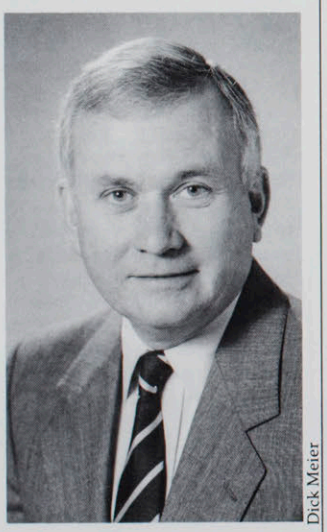
Leonard M. Navarro, the Museum's New Deputy Director. Leonard M. Navarro has joined the Natural History Museum as Deputy Director of Administration. He will be responsible for Administration and Operations in the areas of finance, personnel, security, general services, and facility maintenance.

Mr. Navarro has a Masters in Public Administration from the University of Southern California; he completed his undergraduate studies in Business Administration at California State University at Los Angeles. Prior to coming to the museum, he was a Principal Administrative Analyst in the Finance and Operations Branch of the Chief Administrative Office (CAO). While at the CAO, his responsibilities included being Lead Analyst when analyzing large departmental budget requests and expenditures; conducting detailed studies directed by the Board of Supervisors; coordinating development of state and federal legislation within the county's legislative policy; and monitoring progress of departmental contracting efforts. His management experience in county government will be a valuable asset to the museum.

Steven Stewart; New Superintendent of the Page Museum. We are pleased to announce that Steven Stewart has been appointed Superintendent of the George C. Page Museum. As the on-site administrator, his responsibilities include the museum itself as well as the surrounding Hancock Park area, the La Brea Tar Pits, and other fossil sites.

Mr. Stewart is a graduate of Boston University where he majored in Political Science at the University of Southern California and attended the University of San Fernando Law School.

Beginning his career in television news, Mr. Stewart went on to join the Los Angeles County Assessor's Department in 1970.



Dick Meier

Steven Stewart, the Page Museum's new Superintendent.

After a decade of county service, he entered the private sector as a principal member of Braun & Company, a well-known business and political public relations firm.

Prior to his appointment as Superintendent, he held an administrative post with the Los Angeles County Chief Medical Examiners Office.

Mr. Stewart resides in Pasadena with his wife and two sons.

RESEARCH NEWS

Megamouth Shark—the World's Third—Washes Ashore in Australia. The museum's ichthyologists recently learned that a third specimen of the extremely rare megamouth shark has washed ashore in western Australia. The shark, which apparently was still living when it appeared in the surf although it died soon after, is sixteen feet long, some two feet longer than the Natural History Museum's megamouth. All three megamouth sharks (the first is in the collections of Hawaii's Bishop Museum) known to date have been male.

The megamouth shark *(Megachasma pelagios)* was discovered in 1976, when the first specimen was captured accidentally off the Hawaiian Islands by a naval vessel recovering torpedoes. The second, now on display just opposite the first floor elevators at the Natural History Museum, was entangled in a gill net off the east end of Catalina in November 1984. It apparently feeds on shrimplike euphausiids between 450 and 1500 feet beneath the ocean's surface; it swims with its huge jaws gaping, straining the eupahusiids through gill rakers in its pharynx. The Hawaiian megamouth was captured in deep water; the California shark, however, was no deeper than about 100 feet.

The Australian megamouth shark is now in the Perth Museum of Western Australia. For more information about megamouth sharks, see the March/April 1985 issue of TERRA.

Will Hoffeld, a prominent West Coast handgun expert, has overhauled the museum's collection of Colt revolvers. He has also researched and reorganized the collection, tracing the ownership of some of the Colts back fifty years. Photograph by Dick Meier.

COLLECTIONS

Colt Cure. For the past year, the museum's Colt revolver collection has been undergoing a thorough overhaul, accompanied by detailed research and reorganization. The man at-the-ready is Will Hoffeld, a prominent West Coast handgun expert. In addition to being a talented craftsman, Mr. Hoffeld has had a life-long fascination with the history of the West and has a solid grounding in the history and evolution of firearms.

There are more than three hundred Colts in the museum collection, most from the estate of Frederick R. Rindge. Hoffeld has now processed more than one hundred of the pieces. In addition to cleaning each piece and making minor repairs and adjustments, he also provides a detailed description and in most cases is able to bring together specifics about the origin and ownership of many of the pieces. He has been able to

trace the ownership of many of the Colts for over half a century and has pinpointed many models that are rare or unusual.

According to History Division Curator Don Chaput, the museum's firearms collection is one of the most extensive and most heavily used in the country. He expressed the hope that the valuable contribution that Volunteer Hoffeld is making to the museum may lead to a published inventory of this important collection.

Museum New Home for Hancock Algae Herbarium. The Hancock Algae Herbarium, the fourth-largest collection of marine algae in this country, is now permanently housed in the museum's Botany Section. Consisting of over 50,000 specimens with emphasis on the Eastern Pacific, this collection contains over 900 type specimens. Valerie Anderson, who curated the herbarium when it was at the University of Southern California, has joined the museum's botany staff.

Dr. Kenneth Wilson has been appointed as Research Associate in Botany. Dr. Wilson, a pteridologist (fern specialist), is a professor of biology at California State University, Northridge, a position he has held since 1973. He is currently studying the endemic Hawaiian fern genus *Adenophorus*. Dr. Wilson's assistance in curating the museum's fern collection is greatly appreciated.

The Botany Section has also taken over the Marion Harthill Bryological Herbarium, which was previously housed at the California Polytechnical University, Pomona. This important collection of mosses has a strong concentration of specimens from southern California.

Museum's Invertebrate Fossil Collection Ranks High. In a recent survey of North American institutions housing collections of invertebrate fossils, the Paleontological Society ranked the Invertebrate Paleontology Section of our museum sixth in size among twenty-eight collections surveyed. The five larger collections are housed in the National Museum of Natural History in Washington; the U.S. Geological Survey collections in Washington, Virginia, Colorado, and California; the American Museum of Natural History in New York; the University of California Museum of Paleontology at Berkeley; and the University of Texas at Austin. The museum's invertebrate fossil collection contains more than three million specimens and is well-known to paleontologists of the United States and other countries. Many frequently come or write to the museum to examine and borrow specimens. Many of the specimens have been described and figured in scientific publications. Nearly nine hundred new species have been described from unique specimens (holotypes) housed in the Invertebrate Paleontology Section.

Left: This beautiful specimen of Irish marine algae (Ptilota plumosa) *is part of the Hancock Algae herbarium recently transferred to the museum.*

An 80-million-year-old ammonite (Eupachydiscus *sp. nov.) from the Santa Monica Mountains. Photograph by Takeo Susuki.*

NEW ACQUISITION

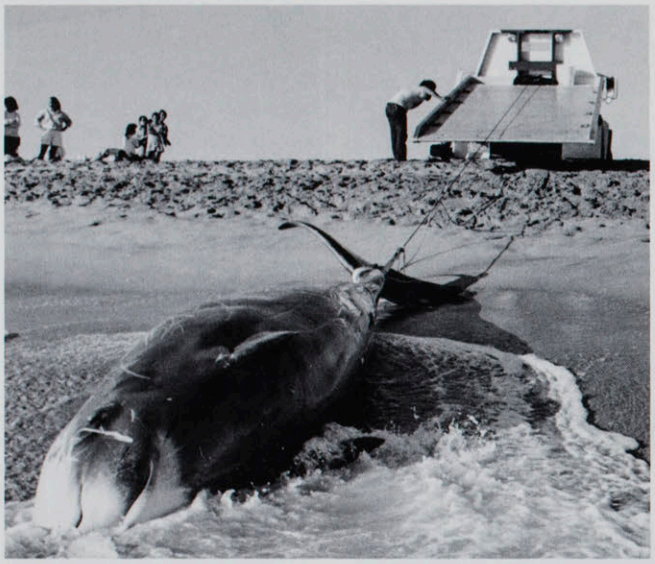
A Rare Cuvier's Beaked Whale. On Friday, August 5, 1988, a Cuvier's beaked whale washed ashore on Venice Beach. The Natural History Museum was immediately notified, and Dr. John Heyning and David Janiger from the museum's Marine Mammal program drove to the scene to examine the whale. They were faced with a big problem in the task of collecting this two-and-a-half-ton whale for the Marine Mammal collection.

The beaked whale had washed ashore on a steep beach and was tumbling and rolling in the surf. A line needed to be secured around the base of the tail so that the whale could be pulled onto the beach; trying to do this in high surf required techniques usually seen in body-surfing contests and cattle-roping events in a rodeo.

Once the whale was hauled out of the water using the winch on the "Whalemobile" donated by the Ford Motor Company (see photo), the bed of the truck was raised and tilted horizontally so that the Cuvier's beaked whale could be secured for transport to the museum's large mammal facility in Vernon.

The Cuvier's beaked whale is considered one of the rarest whales in the world. They live in offshore waters and have never been seen in the waters inside the Channel Islands. This specimen represents the first stranding on the California coast between La Jolla and Santa Cruz.

Little is known of the natural history of the whale—in fact, gaining an accurate weight on



In August 1988 a rare Cuvier's beaked whale washed ashore on Venice Beach. The eighteen-foot, two-and-a-half-ton whale was hauled out of the surf with a rope attached to a winch on the back of the museum's "Whalemobile," a specially designed truck donated by the Ford Motor Company. Photograph by Don Meyer.

this animal was an important and almost unique event. An extensive dissection revealed arteriosclerosis (a hardening of the arteries also found in people) and kidneys heavily infested with parasitic worms, both conditions common in others species of adult beaked whales. Although an exact cause of death has not been determined, much important natural history information was gleaned from this specimen.

GRANTS

National Science Foundation Grant for Shark Exhibit. The Natural History Museum has received a grant of $181,512 from the Informal Science Education Office of the National Science Foundation to support the development of a traveling exhibit on the biology of sharks. Contingent upon the availability of funds, the National Science Foundation has promised an additional $123,795 to be awarded in late 1989, for a total award of $305,307. The project is to be developed cooperatively by the Ichthyology Section, Education Division, and Exhibits Division. The exhibit will be designed and built over a two-year period and will open at the museum in the summer of 1990.

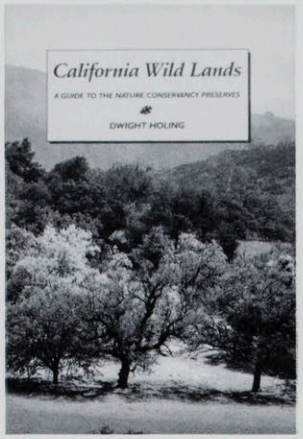
The goals of the exhibit are to dispel much of the misinformation and myths that prevail about sharks and shark attacks and to identify the importance of sharks to people, both culturally and economically. Visitors will descend into the realm of sharks when they enter a walk-through diorama of life in the ocean with many life-size models of sharks; interact with hands-on displays on shark biology, including behavior, reproduction, and sensory perceptions of sharks; and learn how sharks figure in our daily lives. Each component of the exhibit will be rigorously tested for its ability to achieve its stated educational goals before the exhibit is opened to the public, and many items on display will directly involve visitor participation. Visitors will be able to touch shark skin, smell shark repellent, feel a chain-mail wetsuit, peer into a research submarine, and walk into a shark cage. The exhibit will then travel to museums around the United States for the next five years.

Entomology Section Wins National Science Foundation Grant. The Entomology Section of the Natural History Museum has been awarded a major grant by the National Science Foundation, Section Head Charles L. Hogue announced. Thanks to a three-year NSF grant won by the Entomology Section in 1984, the organization and housing of the collection was greatly improved. The new $271,122 award, a continuation of the previous grant, will allow the further strengthening of many important parts of the entomological collection and the improvement of the section's research facilities.

Several ongoing curatorial projects, begun under the first NSF grant, will be completed over the next three years. Among these projects will be further work on the museum's extensive collections of moths and ants, already world-class scientific resources, which will be increased and improved. The grant will be used to keep pace with new additions to the collections and to ensure that the entire collection is available for scientific study.

A fascinating collection of specimens from Cocos Island, a Costa Rican national park located between mainland Central America and the Galapagos Islands, will also be prepared and made available for study. Cocos is interesting and unusual because this island habitat has more in common with the mainland than with other tropical Pacific islands. The museum's unique collection of about 25,000 specimens represents all the extant insects, myriapods, and arachnids ever collected on the island.

With the infusion of support made possible by this grant, more of the collection will receive additional attention from technicians and visiting specialists, and the section will present even more of interest and value to researchers from all over the world.



CALIFORNIA WILDLANDS: A GUIDE TO THE NATURE CONSERVANCY PRESERVES by Dwight Holing. Chronicle Books, 1988, $9.95 (paper). From fog-shrouded beaches to desolate mountain peaks, the state of California is renowned for its breathtakingly beautiful vistas. Equally spectacular are the thousands of species of native plants and animals that live there. Biologically, the Golden State can be considered an island surrounded by the Pacific Ocean, deserts, and mountain ranges. Its geography, coupled with its climatic and geologic history, has resulted in perhpas the highest number of *endemic* species, species found in one place and nowhere else in the world.

Although the 159,000 square miles of California comprise only 4.5 percent of the land mass of the continental United States, its 26 million people make up some 10 percent of the nation's human population. The lion's share of the growth in the numbers of *Homo sapiens* has occurred in the last fifty years, and not surprisingly there has been a disastrous effect on the state's wildlife. The grizzly bear, wolf, Sthenele satyr butterfly, and the obliviosa tiger beetle are but a few of the creatures that have been dogged into the jaws of extinction by urban and agricultural development, smog, acid rain, overhunting, and pesticides. Some are being lost even before they are known to scientists; the single specimen of the Antioch shield-back katydid was discovered preserved in the entomological collection of a museum long after its sand

dune habitat was eliminated by urban sprawl. California can rightly be considered the epicenter of species extinction in the United States.

Today, the erosion of native wildlife continues at a steady pace in California. Julian Donahue, curator of butterflies and moths at the museum, and I have documented the recent extinction of five butterflies from the Santa Monica Mountains. The U.S. Fish and Wildlife Service and the Department of Fish and Game have listed 270 species of plants and animals in California as endangered, threatened, or rare. Sadly, the future does not shine bright for many of the species in the Golden State.

To the rescue comes The Nature Conservancy, a nonprofit organization that is racing to protect and manage the remnants of natural habitat left in the United States, the Caribbean, and Latin America. The group takes no political positions, backs no candidates, and avoids controversy, yet their track record for saving species is nothing short of phenomenal: using a variety of innovative methods, such as easements, voluntary protection, and outright purchase, some three *million* acres of natural habitat have been protected. With the ambitious goal of protecting and managing the most significant remaining pieces of the 178 major habitat types in the state, the Nature Conservancy's Wild California campaign is now underway.

California Wildlands is an outstanding guide to twenty-three of the preserves owned by the Nature Conservancy. From the top of the 377-acre Ring Mountain you can get a bird's-eye view of San Francisco Bay. Along with vivid blooming wildflowers, the eagled-eyed naturalist may be lucky enough to catch a glimpse of the Tiburon harvestman spider, an endemic species found only under serpentine rocks at this site. Visit the Carrizo Plain, a 180,000-acre Nature Conservancy preserve, located in an isolated valley some eighty miles west of Bakersfield. The sight of Sand Hill Cranes, San Joaquin kit foxes, and the recently relocated herds of pronghorn antelope and Tule elk will transport you back over a century ago to the Great Central Valley before it was settled, drained, and planted with monocrops. Some of the other equally spectacular lands interested naturalists may experience and enjoy include the 54,488-acre Santa Cruz Island (the largest of the Channel Islands), the 4,087-acre Desert Tortoise Natural Area that is a sanctuary for its namesake (the State Reptile of California), and the 1,566-acre Jepson Prairie, where the once-widespread but now exceedingly rare delta green ground beetle stalks its prey amongst stands of native grasses and wildflowers.

The book contains detailed descriptions of the geography, history, seasonal highlights, and wildlife of the preserves as well as directions and maps. The section on specific equipment or clothing needed such as binoculars, drinking water, or snow chains will prove to be especially useful to intrepid visitors.

For more information contact The Natural Conservancy at 785 Market Street, San Francisco, CA 94103-9863.

Christopher D. Nagano
Research Associate
Section of Entomology

THE LAST CRUSADE: THE WAR ON CONSUMPTION 1862–1954 by Mark Caldwell. Atheneum, 1988, $22.50 (cloth). Mark Caldwell has authored a fascinating study of the "Captain of all these men of death," as the English writer John Bunyan referred to consumption in the seventeenth century. Moreover, *The Last Crusade* has a good deal of relevance to our latter-day crusades to eradicate such plagues as cancer and AIDS.

A better title for this unusual book would have been *The First Crusade* for in the chronicles of medical history, it was the struggle against tuberculosis that was at the vanguard of all subsequent public health campaigns. Among its innovative accomplishments, the antituberculosis movement pioneered the umbrella voluntary association of both physicians and laity, though not without a vociferous debate; it creatively used the newly available resources of the mass media to inform and educate the American people about the dread malady that caused an estimated one out of seven deaths at the turn of the twentieth century; and it developed ingenious methods to get private and public agencies to cooperate in the seventy-five year war against a microscopic foe.

Over the years there have been numerous studies of tuberculosis and its impact on society, but except for the rather outdated *White Plague* (1952) by the distinguished biologist Rene Dubos and his wife Jean, there is nothing quite like the eclectic treatment of the subject that Caldwell has mastered. In his introduction he unapologetically states his credentials as a literary critic, more at home with identifying image patterns and strategies of narrative than the alien world of medical science. As it turns out his background in the humanities only enriches the marvelous story he has to tell and the imaginative way he tells it. Not only the rich and famous are represented, but heroic physicians and scientists, humble and brave sanitorium patients, even memorable fictional characters —all are democratically allowed to testify what it meant to be participants in "the greatest battle ever fought."

This wide range of testimony begins in the spring of 1862, when Henry Thoreau died of consumption and ends in 1954, when the famous Trudeau Santorium shut down operations. Almost like a novelist, Caldwell skillfully presents these and other actual occurences as dramatic scenes that capture the attention of the reader and then serve as points of departure for larger issues to be discussed.

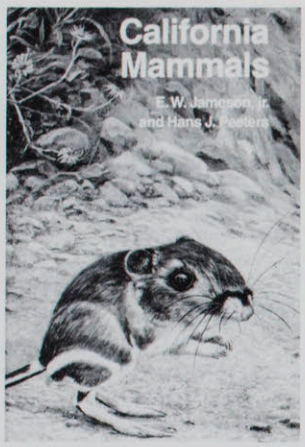
For example, the funeral eulogies for Thoreau treated the earthy curmudgeon as one whom the fevers of consumption had refined to an almost ethereal being. The pervasive myth of the early nineteenth century that tuberculosis was a spiritual disease was also used by dramatists, novelists, and even opera librettists to evoke sympathy for their fictional creations. To make death a transfiguration was in truth a surrender to an implacable enemy.

In 1882 Robert Koch, the great "microbe hunter," tracked down the deadly and elusive germ that caused tuberculosis. Now it was established scientifically that neither a fatal inherited predisposition or a variety of often contradictory deleterious environmental conditions was directly responsible for the disease. A newly muscular realism gradually laid to rest the sickly romance of consumption. The war was on.

Almost simultaneously with Koch's monumental discovery, Edward Livingston Trudeau inaugurated the era of sanitorium treatment when he opened his once legendary "little red cottage" at Saranac Lake in the Adirondocks. If there is a single commanding presence in the antituberculosis campaign, it is this vigorous physician who refused to acquiesce passively in his own death sentence from the lethal disease. Trudeau's words and deeds were inspirational to the crusaders of his day, and therefore when the sanitorium that bore his name closed in 1954, it provided a fitting image for the cessation of hostilities against consumption. Antibiotics had finished off this ancient scourge of mankind. Hundreds of abandoned hospitals and sanitoriums became haunted with the ghosts of the past. But Mark Caldwell, by telling their stories so movingly, has made these forgotten ghosts come alive.

Burton Reiner
Assistant Curator
History Division

CALIFORNIA MAMMALS by E. W. Jameson, Jr., and Hans J. Peeters. University of California Press, 1988, $24.95 (cloth). California has more species of mammals than any other state in the country; however, there has not been a good field guide available for many years. The most recent book, *Mammals of the Pacific States* by Lloyd G. Ingles, was published in 1965. Although this was an excellent compilation of information on mammals in California, it has



become somewhat outdated. The University of California Press has now come out with a field guide to the diverse mammals of this state, and we find it to be a welcome addition.

This book has been written for all persons who wish to learn about mammals native to California. It is not a technical treatise, but rather a book that can be used as a reference in the field by the hiker, the sports enthusiast, or field biologist. It contains eight chapters on mammal ecology, ten sections of species accounts, plus range maps, color plates, a glossary, and an index.

The ecology portion of the book is divided into short, thorough sections giving the reader an ecological perspective on how mammals fit into their environment. Topics covered include reproduction, hibernation, migration and movement, communication, and relationships with humans. This section also contains a table listing the rare and endangered mammals as well as drawings of the more common mammal tracks and scats found along dirt roads and trails.

The species accounts make up most of the remainder of the book. Roughly 200 species of land and aquatic mammals are recorded, described, and illustrated. The second author produced sixteen superlative color plates depicting 116 species. In addition, there are black and white sketches throughout the book. All illustrations show characteristic, lifelike poses.

The keys are nontechnical and, as stated by the authors "intended to be used in conjunction with the descriptions, plates, and range maps." They combine detailed descriptions of teeth and skulls as well as color and body proportions. In some cases, unfortunately, the keys are too simplistic or lack the necessary details required for accurate identification of mammals. The use of keys is sometimes inconsistent, duplicated, or inaccurate.

This book is well-produced; the binding appears to be of good quality (before we confer final judgment, we will have to give our copies the field-test of time!). Given the reasonable price and the coverage the book provides, we believe *California Mammals* will meet the authors' expectations of providing a useful, nontechnical reference to all those with an interest in California wildlife.

Jesus Maldonado
Curatorial Assistant
Sarah B. George
Assistant Curator
Section of Mammalogy

THE EARLIEST PRINTED MAPS: 1472–1500 by Tony Campbell. University of California Press, 1987. $75 (cloth). Tony Campbell, Map Librarian of the British Library, has produced a catalogue of incunable maps—that is, maps printed before 1501. The catalogue describes those maps listed in the landmark cartobibliography of Marcel Destombes, *Catalogue des Cartes Gravées au XV^e Siecle* published in 1952. The book contains discussions of 222 maps, sixty-nine plates, and a short introduction that places the maps in a larger context. Mr. Campbell's descriptions emphasize not only the geographical content of the maps, but also the map as artifact—an up-and-coming area in the field of the history of cartography. The book is not for the general reader, but it is an important contribution to its field and will be of interest to TERRA readers who appreciate and enjoy maps.

Errol Wayne Stevens
Associate Curator
Seaver Center for Western History Research

A CURIOUS BEETLE

Q: This strange one-and-half-inch bug was found on a kitchen floor in Pasadena. Can you give us any idea what it is? Is it harmful or dangerous?

A: According to Dr. Charles L. Hogue, the museum's Curator of Entomology, this is indeed an unusual beetle; the museum has only two other females of this species, *Euthysanius lautus*, in its collection. While the males are often found in Los Angeles County's more rustic areas (they have been collected in Topanga Canyon, Mount Washington, and on the Channel Islands), the females are more retiring. The male's branched antennae probably detect pheromones that the females emit to entice them to mate, and they fly in pursuit of the nonwinged females.

Euthysanius lautus, which has no common name, is an unusual member of the click beetle family (Elateridae), of which there are many species living in Los Angeles County., Most click beetles have a special mechanism on their underside that, when it is snapped closed, emits an audible clicking sound. According to Dr. Hogue, "a click beetle, stranded on its back, employs this means to flip itself into the air. With luck, it lands on its feet the first try and ambles off; more often several attempts are necessary for the insect to right itself." Dr. Hogue adds, however, "the clicking mechanism is poorly developed in *Euthysanius* and it probably does not perform these antics. Certainly they would be beyond the capabilities of this bulky female."

This beetle's diet is unknown, but it most probably does not present a threat to our houses, carpets, health, or pets. Some click beetles are of economic importance as the larvae, called "wireworms," of some species eat the roots of crops.

The museum's curators are often asked to identify artifacts and specimens that people have found, purchased, or inherited and animals, plants, minerals, and fossils that they have encountered in their yards or at the beach or on a hike. "Housecalls" is a new feature of TERRA in which the museum's curatorial staff will discuss interesting questions that the museum's members and the general public have frequently asked them.

John De Leon

Euthysanius lautus, *two times life size.*

Name _____

Address _____

City _____

State _____ Zip _____

Place
Stamp
Here

Natural History Museum of Los Angeles County
% TicketMaster
Box 76838
Los Angeles, CA 90005

Detach and mail form in envelope

Focus on the West

Frank Layton Washburn took this picture of one of the residents of Los Angeles's Chinatown around 1905. The Los Angeles Chinese community dates from 1869 when a contingent of about fifty former laborers on the Central Pacific Railroad moved south from San Francisco and settled near the Plaza. Despite a generally chilly reception from the general populace and the horrible massacre of 1871 in which nineteen Chinese died, the community took root and grew. Los Angeles's first Chinatown grew up near the Plaza, especially along Alameda Street. In the 1920s, when this neighborhood was torn down to make way for Union Station, a new Chinatown formed on Hill and North Broadway streets.

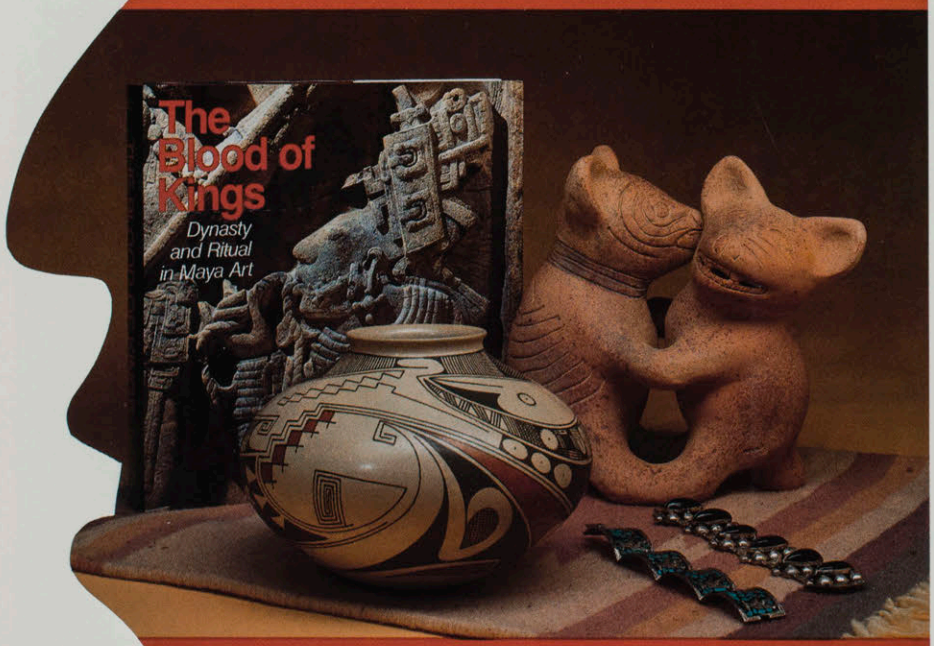
Washburn was an inspector for the gas and electric company who, in the course of his work, not only took photographs of things such as power lines, sewers, and trench diggers, but also of members of the Los Angeles community. His photographs of L.A.'s old Chinatown are some of the best in existence.

Washburn Collection, Seaver Center for Western History Research

Focus on the West: Images from the Seaver Center **is a new TERRA feature that presents the photographic highlights of the museum's Seaver Center for Western History Research. The Seaver Center is rich in photographs and other materials relating to the history of the American West.**

YOU'LL FIND MEXICO IN THE MUSEUM STORES

From the contemporary weavings of the Zapotec Indians to reproductions of ancient Mayan ceramics, the Ethnic Arts Shop offers a diverse selection of the art of Mexico. Also available is pottery from the Sierra Madre in northern Mexico, including works by premiere potter Juan Quezada, who is credited with reviving the Casas Grande ceramic tradition. Mexican folk art and festival masks are also for sale. Complementing the Ethnic Art Shop's offerings, the Museum Bookstore sells an array of books ranging from *The Blood of Kings*, a landmark work on the history of pre-Columbian civilization to *Living Maya*, which presents a personal text and photographic essay of the Maya today.



ETHNIC ARTS SHOP and MUSEUM BOOKSTORE
Natural History Museum
900 Exposition Boulevard
Los Angeles, CA 90007
213/744-3434

Natural History Museum of Los Angeles County
Exposition Park, Los Angeles, California 90007